Washington State Department of Transportation
Bridge Preservation Dive Team

UNDERWATER INSPECTION REPORT FOR

PORT WASHINGTON CS1840

BRIDGE NO. 303/12 **STRUCTURE ID 0005565A**

Prepared For WSDOT

Inspection Date October 14, 2020

Lead Inspector/Diver Darren O. Nebergall
Cert. # G0314

Inspector/Diver Richard M. Pawelka

Status: Released Printed On: 1/7/2021 Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e CD Date: 12/8/2020 Program Mgr: Evan M Grimm

UNDERWATER INSPECTION REPORT
FOR THE
PORT WASHINGTON CS1840

BRIDGE NO. 303/12
STRUCTURE ID 0005565A

EXECUTIVE SUMMARY

The WSDOT Bridge Preservation Office (BPO) Dive Team performed an underwater inspection of the Port Washington CS1840 bridge over the Port Washington Narrows on October 14th and 19th, 2020. Piers 3 through 9 were in the waterway during the inspection. All in-water piers are comprised of two concrete columns with an upper strut, founded on a shared spread footing/seal.

The submerged portions of the substructure are in fair to good condition. Several of the columns have vertical corner cracking or spalls just above the intertidal zone (ITZ), some with rusty staining from rusty rebars. The submerged portions of the columns have heavy marine growth up to 6-inches thick. The pedestals and footings are also heavily encrusted with marine growth, up to several feet thick. Tops of footings were typically very uneven and vary in elevation several feet. Some of the piers had portions of steel cofferdam still in place. Pier concrete condition was mostly sound, but Piers 4 & 7 were noted to have several areas of poor consolidation voiding in the footing vertical faces and at the column/footing interfaces.

All submerged piers have exposed footings to varying extents. The footing exposures are similar to previous underwater inspections. The maximum vertical footing exposure was found at Pier 3 on the northwest corner where there is an estimated remaining embedded depth of 10-feet. No evidence of significant local scour was found at the piers since the last underwater inspection. Riprap protection is in place at Piers 4 through 8. Riprap extents should continue to be monitored during each underwater inspection, since the piers were designed for riprap protection. REPAIR #14242 calls for the riprap to be restored to the originally designed conditions.

Recommend retaining 60-month frequency for underwater inspections.

Washington State Department of Transportation

Daily Site Dive Log

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | CD Date: 12/8/2020 | Program Mgr: Evan M Grimm

Inspector	Darren O. Nebergall	**Date**	10/14/2020
Bridge No.	303/12	**Bridge Name**	PORT WASHINGTON CS1840
Bridge Type	Girder and floorbeam system	**Waterway Name**	PORT WASHINGTON NARROWS
Dive Objective	Inspection of submerged substructure elements.		

Diving Operation

Type of Operation ☐ SCUBA ☑ Surface Supplied Air ☐ Snorkel ☐ ROV ☐ Other _____

Equipment

Suit	Dry suit
Air Supply	Surface Supplied
Site Access	Munson Dive Boat - Launched from Evergreen Rotary Park
Inspection Tools	Hammer/scraper, u/w light, GoPro camera, survey rod

Conditions

Water	☑ Salt	☐ Fresh	☐ Brackish	Temperature	55 °F	Visibility	5-10 ft	
Surface	☑ Calm	☐ Choppy	☐ Rough					
Tide	☐ High	☑ Low	☑ Flood	☑ Ebb	☐ N/A			
Current	☐ Fast	☑ Moderate	☐ Slow	Velocity	1-2 ft/sec			
Weather	☐ Clear	☑ Cloudy	☐ Overcast	☐ Rain	☐ Windy	Air Temp	52 °F	

Diver Checks

☑ First Aid Equipment on Site	☑ Physical Condition of Diver(s) Checked
☑ Communication for EMS	☑ Communications for Diver(s) Checked
☑ Dive Gear Inspected	☑ Team Briefed and Understands Dive Plan
☑ Air Source Checked	☑ Special Site Hazards Noted
☑ Pre-Activity Safety Plan Reviewed	☑ Line-Tending Procedures Reviewed
☑ COVID-19 Requirements	☐ _____

Dive Plan and Dive Team Procedures

Assess site conditions and determine type of dive operation. Hold on-site pre-dive safety meeting to discuss and plan dive operation, determine roles and responsibilities, review emergency procedures, and check physical condition of diver(s). Assemble and check dive gear. Check communication for diver(s). After completion of dive, review notes, check condition of diver(s), take soundings and photos as required.

Washington State Department of Transportation

Daily Site Dive Log

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | CD Date: 12/8/2020 | Program Mgr: Evan M Grimm

Dive Schedule

Dive No.	Entry Time	Exit Time	Total Time in Water	Maximum Depth	Remarks
1	09:31:00	09:53:00	00:22:00	16 fsw *	RMP dive Pier 9
2	10:09:00	10:25:00	00:16:00	29 fsw *	RMP dive Pier 8
3	10:41:00	11:02:00	00:21:00	31 fsw *	RMP dive Pier 7
4	11:10:00	11:25:00	00:15:00	16 fsw *	RMP dive Pier 3

Dive Narrative

The team converged at the boat ramp parking lot (Evergreen Rotary Park) and discussed site specific hazards, diving mode, and team roles during the pre-activity safety meeting. A surface-supplied diving operation was chosen and the necessary gear was assembled and checked while the boat was prepared for launching. A water tie was taken at Pier 3 and then the boat was moved to Pier 9 when the inspection started once the tidal current slowed. The diver splashed and proceeded to inspect the columns and exposed foundation, relaying notes and channel bottom water depths to support personnel on the boat via hardwired comms in the diver umbilical. When Pier 9 was completed, the diver was recovered back to the boat and the operation moved to the next pier where the process was repeated. The diver's condition was checked at the end of each dive. Notes and photos were reviewed for completeness prior to leaving the site for the day.

Air IN / OUT (psig in the bank)
1 3575 / 3325
2 3325 / 3175
3 3175 / 2925
4 2925 / 2850

* fsw = feet sea water

Dive Team Members

Darren Nebergall, P.E. (DON)	Inspector / Notes
(Name)	(Role)
Richard Pawelka, P.E. (RMP)	Diver
(Name)	(Role)
James Harding, P.E. (JRWH)	Stand-by diver
(Name)	(Role)
Michael Smith, P.E. (MBS)	DPIC
(Name)	(Role)

Washington State Department of Transportation

Daily Site Dive Log

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | CD Date: 12/8/2020 | Program Mgr: Evan M Grimm

Inspector	Darren O. Nebergall	**Date**	10/19/2020
Bridge No.	303/12	**Bridge Name**	PORT WASHINGTON CS1840
Bridge Type	Girder and floorbeam system	**Waterway Name**	PORT WASHINGTON NARROWS
Dive Objective	Inspection of submerged substructure elements.		

Diving Operation

Type of Operation ☐ SCUBA ☑ Surface Supplied Air ☐ Snorkel ☐ ROV ☐ Other _____

Equipment

Suit	Dry suit
Air Supply	Surface Supplied
Site Access	Munson Dive Boat - Launched from Evergreen Rotary Park
Inspection Tools	Hammer/scraper, u/w light, GoPro camera, survey rod

Conditions

Water	☑ Salt	☐ Fresh	☐ Brackish	Temperature	55 °F	Visibility	8-10 ft	
Surface	☑ Calm	☐ Choppy	☐ Rough					
Tide	☐ High	☑ Low	☐ Flood	☑ Ebb	☐ N/A			
Current	☐ Fast	☑ Moderate	☐ Slow	Velocity	1-2 ft/sec			
Weather	☐ Clear	☐ Cloudy	☑ Overcast	☐ Rain	☐ Windy	Air Temp	60 °F	

Diver Checks

☑ First Aid Equipment on Site	☑ Physical Condition of Diver(s) Checked
☑ Communication for EMS	☑ Communications for Diver(s) Checked
☑ Dive Gear Inspected	☑ Team Briefed and Understands Dive Plan
☑ Air Source Checked	☑ Special Site Hazards Noted
☑ Pre-Activity Safety Plan Reviewed	☑ Line-Tending Procedures Reviewed
☑ COVID-19 Requirements	☐

Dive Plan and Dive Team Procedures

Assess site conditions and determine type of dive operation. Hold on-site pre-dive safety meeting to discuss and plan dive operation, determine roles and responsibilities, review emergency procedures, and check physical condition of diver(s). Assemble and check dive gear. Check communication for diver(s). After completion of dive, review notes, check condition of diver(s), take soundings and photos as required.

Washington State Department of Transportation

Daily Site Dive Log

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | CD Date: 12/8/2020 | Program Mgr: Evan M Grimm

Dive Schedule

Dive No.	Entry Time	Exit Time	Total Time in Water	Maximum Depth	Remarks
1	14:04:00	14:24:00	00:20:00	31 fsw *	JRWH - dive Pier 6
2	14:33:00	14:51:00	00:18:00	45 fsw *	JRWH - dive Pier 5
3	14:57:00	15:13:00	00:16:00	31 fsw *	JRWH - dive Pier 4

Dive Narrative

The team converged at the boat ramp parking lot (Evergreen Rotary Park) and discussed site specific hazards, diving mode, and team roles during the pre-activity safety meeting. A surface-supplied diving operation was chosen and the necessary gear was assembled and checked while the boat was prepared for launching. A water tie was taken at Pier 3 and then the boat was moved to Pier 6 when the inspection started once the tidal current slowed. The diver splashed and proceeded to inspect the columns and exposed foundation, relaying notes and channel bottom water depths to support personnel on the boat via hardwired comms in the diver umbilical. When Pier 6 was completed, the diver was recovered back to the boat and the operation moved to the next pier where the process was repeated. The diver's condition was checked at the end of each dive. Notes and photos were reviewed for completeness prior to leaving the site for the day.

Air IN / OUT (psig in the bank)
1 2600 / 2450
2 2450 / 2250
3 2250 / 2000

* fsw = feet sea water

Dive Team Members

Darren Nebergall, P.E. (DON)	Inspector / Notes
(Name)	(Role)
James Harding, P.E. (JRWH)	Diver
(Name)	(Role)
Richard Pawelka, P.E. (RMP)	Stand-by diver
(Name)	(Role)
Michael Smith, P.E. (MBS)	DPIC
(Name)	(Role)

Washington State Department of Transportation

Underwater Inspection Report

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | CD Date: 12/8/2020 | Program Mgr: Evan M Grimm

Inspector	Darren O. Nebergall	**Agency/Owner**	WSDOT	**Date**	10/14/2020
Bridge No.	303/12	**Bridge Name**	PORT WASHINGTON CS1840		
Bridge Type	Girder and floorbeam system	**Waterway Name**	PORT WASHINGTON NARROWS		
Substructure	Concrete Columns	**Foundation**	Concrete Footings and Seals		
No. Spans	15	**No. Piers Dived**	7	**Inspection Hours**	7.0

6 [ ] Substructure Condition (1676) 8 [ ] Chan/Protection (1677) 3 [ ] Scour Code (1680)

BMS Elements

Element	Element Description	Total	Units	State 1	State 2	State 3	State 4
220	Concrete Submerged Foundation	7	EA	5	0	2	0
227	Concrete Submerged Pile/Column	14	EA	10	0	4	0
361	Scour	7	EA	0	0	7	0

Notes

0

Bridge is oriented south to north.
The City of Bremerton has stockpiled sand below Spans 12 and 13. Lebo Blvd. is under Span 14.
The area below Span 15 is enclosed by a chain link fence. In 2014 the area was accessed from Lebo Blvd. by removing two fence ties and pulling back the fence.
Trees obstruct UBIT access below Spans 10 and 11 (Photos #72). REPAIR #14239.

Damage Report 10/16/20
On 10/16/20 a southbound RV lost control, crossing over all lanes and damaging the northeast approach rail, transition and pedestrian rail. See element notes #340, #685, and #686.

220

Underwater Inspection Findings:
Quantity includes the seven submerged footings that are exposed, Piers 3 through 9. All submerged concrete is heavily encrusted with marine growth (Photo #UW-2 and #UW-7). All pedestal and footing top surfaces are very irregular and vary in elevation several feet. There are some steel sheet pile cofferdam remains in place around the footings at Pier 4, 5, and 9 (Photo #UW-8). Piers 5 and 7 have some poor consolidation voids/lenses in the footing (CS3).

227

Piers 2-10 included in quantity.
Piers 3, 4, 5 and 6 struts have diagonal leaching cracks.
Pier 6 Column A, east face has a 3-ft x 2-ft delaminated area just above the intertidal zone (Photo #UW-3).
Pier 7 outside corners have shallow impact spalls just above the intertidal zone (Photo #UW-4).
Pier 8 columns have vertical cracks up to 4 ft. long in the intertidal zone. Some are delaminated with rust staining. The SW corner of Column A has spalled, exposing the corner vertical rebar (Photo #UW-5).

Underwater Inspection Findings:
All in water piers have two columns with a strut above and a shared footing below (Photo #UW-9). Heavy marine growth on submerged columns in Piers 3 through 9 (Photo #UW-10). Random cleaning in small areas revealed sound concrete. Pier 7 Column B has a poor consolidation void at the column/footing interface, 18-inches along the south and east faces.

Inspector	Darren O. Nebergall	**Agency/Owner**	WSDOT	**Date**	10/14/2020
Bridge No.	303/12	**Bridge Name**	PORT WASHINGTON CS1840		
Bridge Type	Girder and floorbeam system	**Waterway Name**	PORT WASHINGTON NARROWS		
Substructure	Concrete Columns	**Foundation**	Concrete Footings and Seals		
No. Spans	15	**No. Piers Dived**	7	**Inspection Hours**	7.0

Notes (Continued)

361	This bridge is over salt water. Piers 3 through 9 are in channel. The riprap slope repair at Pier 11 is stable. Underwater Inspection Findings: Overall channel is stable with only minor changes to sounding depths since the previous underwater inspection. Bridge was designed for riprap protection at all in-water piers. Riprap in place at Piers 4 thru 8 has settled/consolidated somewhat however vertical footing exposures are within 1-2 ft. of what was noted previously. Minimum remaining footing embedment is at the NW corner of Pier 3 where 10-ft remains to the bottom of the footing. REPAIR #14242 calls for riprap to be restored to the original design plans.
1677	Underwater Inspection Findings: Stable, well vegetated tidal banks in the vicinity of the bridge. Riprap in place along the north shore. See Photos #UW-11 and #UW-12.
1680	Continue to monitor Piers 3 through 9 for scour. These piers and the embankments are designed for riprap protection. The Pier 3 spread footing is 15' 0" thick. Piers 4 and 8 have 20' 0" thick spread footings. The Pier 5 spread footing is 24' 0" thick. Piers 6 and 7 have 22' 0" thick spread footings. The Pier 9 spread footing is 16' 6" thick.
2693	Dive team does channel soundings from the boat and performs fathometric surveys at the request of the Scour Engineer. See 2020 Underwater Inspection Report drawings (attached).

Repairs

Repair No	Pr	R	Repair Description	BMS	Noted	Maint	Verified
14242	1	S	Design and install scour countermeasures for all submerged piers to rebuild the channel bottom around the piers back to original design plans.	361	10/9/2018		

Inspections Performed and Resources Required

Report Type	Date	Freq	Hrs	Insp	CertNo	Coinsp	Note
Routine	10/13/2020	24	2.0	FPP	G0710	RAB	

Resources	Hours	Min	Pref	Max	Freq Date	Need Date	Override	Notes
SNDG								Underwater inspectors provide groundlines. Regional inspectors do not need to take soundings.

Report Type	Date	Freq	Hrs	Insp	CertNo	Coinsp	Note
Fracture Critical	10/13/2020	24	5.0	FPP	G0710	RAB	

Resources	Hours	Min	Pref	Max	Freq Date	Need Date	Override	Notes
UBIT	5.00	52	62	62	24 10/13/2020	10/13/2022		Deployed from both sides.
Attenuator								Contact the Olympi Region at (360) 357-2763 to arrange for traffic control.
Scheduling Restrictions								Traffic Window: WEEKDAYS 9 A.M. - 3 P.M.

Report Type	Date	Freq	Hrs	Insp	CertNo	Coinsp	Note
Underwater	10/14/2020	60	7.0	DON	G0314	RMP	Underwater inspection by WSDOT Dive Team.

Washington State Department of Transportation

Underwater Inspection Report

Status: Released Printed On: 1/7/2021 Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e CD Date: 12/8/2020 Program Mgr: Evan M Grimm

Inspector	Darren O. Nebergall	**Agency/Owner**	WSDOT	**Date**	10/14/2020
Bridge No.	303/12	**Bridge Name**	PORT WASHINGTON CS1840		
Bridge Type	Girder and floorbeam system	**Waterway Name**	PORT WASHINGTON NARROWS		
Substructure	Concrete Columns	**Foundation**	Concrete Footings and Seals		
No. Spans	15	**No. Piers Dived**	7	**Inspection Hours**	7.0

Resources	Hours	Min	Pref	Max	Freq	Date	Need Date	Override	Notes
SNDG					60	10/14/2020	10/14/2025		Underwater inspectors provide groundlines. Regional inspectors do not need to take soundings.
Boat	8.00	M	M	M					Munson dive boat launched from boat ramp between Warren Ave and Manette Bridges.
Tides									Check slack tide times for the optimal dive inspection experience (Port Washington, South Entrance is the more accurate prediction for the bridge site).
Damage		10/16/2020		1.0	GAS	G0709			On 10/16/20 a southbound RV lost control, crossing over all lanes and damaging the northeast approach rail, transitions and pedestrian rail. Attached CFDR from 4/4/20 Damage
Geometric		9/4/2013	144	1.0	GGI	GEOM	DJM		Added Geometric Report

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | Release Date: 1/7/2021 | Program Mgr: Evan M Grimm

Br. No. 303/12 **SID** 0005565A **Br. Name** PORT WASHINGTON CS1840

Carrying SR 303 **Route On** 00303 **Mile Post** 0.73

Intersecting PORT WASHINGTON NARROWS **Route Under** **Mile Post**

UW-2

220 Concrete Submerged Foundation

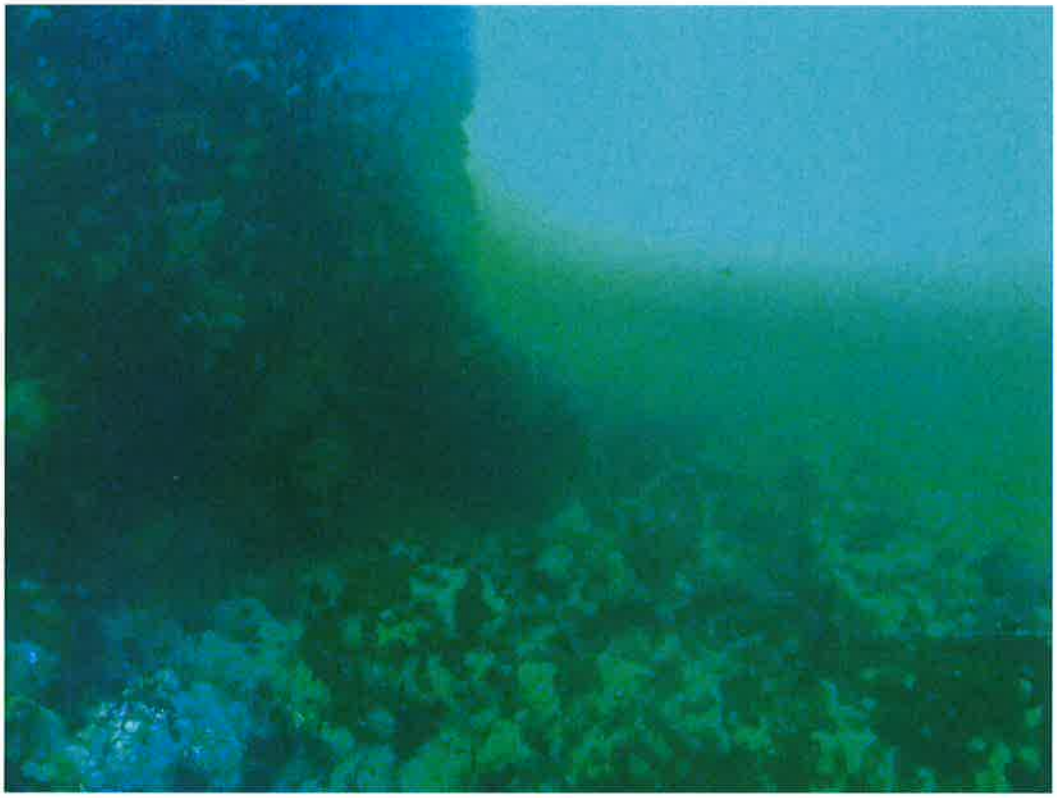
Photo Type: S - Scour

Orientation:

Date: 10/26/2015

Repairs: 14242

Typical heavy marine growth on submerged surfaces.



UW-7

220 Concrete Submerged Foundation

Photo Type: S - Scour

Orientation: NW

Date: 10/14/2020

Repairs: 14242

Pier 8 top of footing showing typical heavy marine growth on submerged surfaces.

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | Release Date: 1/7/2021 | Program Mgr: Evan M Grimm

Br. No. 303/12 **SID** 0005565A **Br. Name** PORT WASHINGTON CS1840

Carrying SR 303 **Route On** 00303 **Mile Post** 0.73

Intersecting PORT WASHINGTON NARROWS **Route Under** **Mile Post**

UW-8

220 Concrete Submerged Foundation

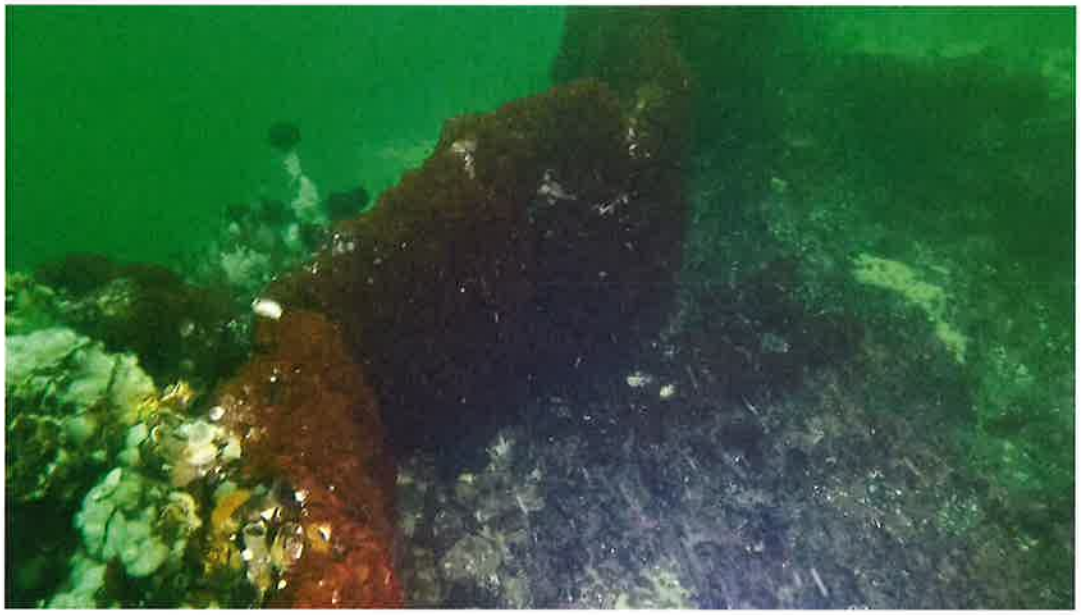
Photo Type: I - In Depth

Orientation: SW

Date: 10/14/2020

Repairs:

North face Pier 4 top of footing and sheet pile cofferdam remains.



UW-3

227 Concrete Submerged Pile-Column

Photo Type: G - General

Orientation: NW

Date: 10/26/2015

Repairs:

Pier 6, Column A, east face; 3-ft x 2-ft delam/spall just above the ITZ.

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | Release Date: 1/7/2021 | Program Mgr: Evan M Grimm

Br. No. 303/12 **SID** 0005565A **Br. Name** PORT WASHINGTON CS1840

Carrying SR 303 **Route On** 00303 **Mile Post** 0.73

Intersecting PORT WASHINGTON NARROWS **Route Under** **Mile Post**

UW-4

227 Concrete Submerged Pile-Column

Photo Type: G - General

Orientation: E

Date: 10/26/2015

Repairs:

Pier 7, Column A, NW corner; shallow impact spalls. Typical of other corners on Pier 7 columns.

UW-5

227 Concrete Submerged Pile-Column

Photo Type: G - General

Orientation: NE

Date: 10/26/2015

Repairs:

Pier 8, Column A, SW corner; spalled corner with exposed rebar. Other Pier 8 corners have vertical cracking with rust staining.

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | Release Date: 1/7/2021 | Program Mgr: Evan M Grimm

Br. No. 303/12 **SID** 0005565A **Br. Name** PORT WASHINGTON CS1840

Carrying SR 303 **Route On** 00303 **Mile Post** 0.73

Intersecting PORT WASHINGTON NARROWS **Route Under** **Mile Post**

UW-9

227 Concrete Submerged Pile-Column

Photo Type: G - General

Orientation: NW

Date: 10/14/2020

Repairs:

Pier 9. Typical in-water pier elevation and configuration. Note north bank riprap.

UW-10

227 Concrete Submerged Pile-Column

Photo Type: I - In Depth

Orientation: DN

Date: 10/14/2020

Repairs:

Looking down the east column at Pier 8, showing typical heavy marine growth below the ITZ.

Status: Released | Printed On: 1/7/2021 | Agency: Washington State

CD Guid: 24aab633-e3cf-4171-8731-d8188854429e | Release Date: 1/7/2021 | Program Mgr: Evan M Grimm

Br. No. 303/12 **SID** 0005565A **Br. Name** PORT WASHINGTON CS1840

Carrying SR 303 **Route On** 00303 **Mile Post** 0.73

Intersecting PORT WASHINGTON NARROWS **Route Under** **Mile Post**

UW-11

1677 Channel Protection

Photo Type: G - General

Orientation: E

Date: 10/14/2020

Repairs:

Channel view looking east (towards Manette Bridge).

UW-12

1677 Channel Protection

Photo Type: G - General

Orientation: W

Date: 10/14/2020

Repairs:

Channel view looking west into Dyes Inlet.

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
NBI STRUCTURE INVENTORY AND APPRAISAL REPORT
(ENGLISH UNITS)

CD Date: 12/8/2020 Printed on: 1/7/2021
CD Guid: 24aab633-e3cf-4171-8731-d8188854429e

IDENTIFICATION

(1)	STATE NAME - WASHINGTON	530
(8)	STRUCTURE NUMBER	# 0005565A0000000
(5)	INVENTORY ROUTE (ON/UNDER) - On	1 3 1 00303
	STATE ROUTE MILEPOST	0.73
(2)	HIGHWAY AGENCY DISTRICT - OL Region	03
(3)	COUNTY CODE 35 - Kitsap County	(4) PLACE CODE 00000
(6)	FEATURES INTERSECTED	PORT WASHINGTON NARROWS
(7)	FACILITY CARRIED	SR 303
(9)	LOCATION	0.7 N JCT SR 304
(12)	BASE HIGHWAY NETWORK - Part of network	1
(13)	LRS INV ROUTE AND SUB ROUTE	30300
(11)	LRS MILEPOST	0.73
(16)	LATITUDE	47 Deg 34 Min 41.02 Sec
(17)	LONGITUDE	122 Deg 37 Min 57.83 Sec
(98A)	BORDER BR. - Not a border bridge (98B)	(99) BORDER BR. SID - Not a border bridge

STRUCTURE TYPE AND MATERIAL

(43)	STRUCTURE TYPE MAIN: MATERIAL - Steel continuous	
	DESIGN - Girder & floorbeam sys	403
(44)	STRUCTURE TYPE APPR: MATERIAL - Other	
	DESIGN - Mixed types	020
(45)	NO. OF SPANS IN MAIN UNIT	3
(46)	NO. OF APPROACH SPANS	12
(107)	DECK STRUCTURE TYPE - Conc. CIP	1
(108)	WEARING SURFACE / PROTECTIVE SYSTEM:	
(A)	TYPE OF WEARING SURFACE - Epoxy Overlay	5
(B)	TYPE OF MEMBRANE - None	0
(C)	TYPE OF DECK PROTECTION - None	0

AGE AND SERVICE

(27)	YEAR BUILT	1958
(106)	YEAR RECONSTRUCTED	0000
(42)	TYPE OF SERVICE ON - Highway & Pedestrian	5
	UNDER - Highway & waterway	6
(28)	LANES: ON STRUCTURE 4	UNDER STRUCTURE 2
(29)	AVERAGE DAILY TRAFFIC	40478
(30)	YEAR OF ADT 2016	(109) TRUCK ADT 3%
(19)	BYPASS, DETOUR LENGTH	3 mi

GEOMETRIC DATA

(48)	LENGTH OF MAXIMUM SPAN	250 ft
(49)	STRUCTURE LENGTH	1717 ft
(50)	CURB OR SIDEWALK: LEFT 4.0 ft	RIGHT 4.0 ft
(51)	BRIDGE ROADWAY WIDTH CURB TO CURB	54.0 ft
(52)	DECK WIDTH OUT TO OUT	67.5 ft
(32)	APPROACH ROADWAY WIDTH (W/SHOULDERS)	54 ft
(33)	BRIDGE MEDIAN - Closed median non-m	3
(34)	SKEW 0 Deg	(35) STRUCTURE FLARED No 0
(10)	INVENTORY ROUTE MIN VERT CLEAR	99 ft 99 in
(47)	INVENTORY ROUTE TOTAL HORIZ CLEAR	27 ft 00 in
(53)	MIN VERT CLEAR OVER BRIDGE RDW	99 ft 99 in
(54)	MIN VERT UNDERCLEAR	27 ft 01 in H
(55)	MIN LAT UNDERCLEAR RT	6.7 ft H
(56)	MIN LAT UNDERCLEAR LT	0.0 ft

NAVIGATION DATA

(38)	NAVIGATION CONTROL - Navigation control	1
(111)	PIER PROTECTION -	1
(39)	NAVIGATION VERTICAL CLEARANCE	80 ft
(116)	VERT-LIFT BRIDGE NAV MIN VERT CLR	
(40)	NAVIGATION HORIZONTAL CLR	231 ft

WSBIS DATA

	BRIDGE NUMBER	303/12
	BRIDGE NAME	PORT WASHINGTON CS1840
	CUSTODIAN	Washington State
	CROSSING DESC	PORT WASHINGTON CS1830
	MAIN LISTING FLAG	M
	SUFFICIENCY RATING	44.17 Not SD or FO

CLASSIFICATION

(112)	NBIS BRIDGE LENGTH	Y
(104)	HIGHWAY SYSTEM - On the NHS	1
(26)	FUNCTIONAL CLASS - Other Principal Arterial	14
(100)	DEFENSE HIGHWAY - Not a STRAHNET route	0
(101)	PARALLEL STRUCTURE - Not a parallel bridge	N
(102)	DIRECTION OF TRAFFIC - 2-way traffic	2
(103)	TEMPORARY STRUCTURE - Not Applicable	
(105)	FEDERAL LANDS HIGHWAY - Not Applicable	0
(110)	DESIGNATED NATIONAL NETWORK - Part of network	1
(20)	TOLL - Non-toll structure	3
(21)	MAINTENANCE - State Highway Agency	01
(22)	OWNER - Washington State	1
(37)	HISTORICAL SIGNIFICANCE - Eligible for NRHP	2

CONDITION

(58)	DECK	5
(59)	SUPERSTRUCTURE	5
(60)	SUBSTRUCTURE	6
(61)	CHANNEL AND CHANNEL PROTECTION	8
(62)	CULVERTS	N

LOAD RATING AND POSTING

(31)	DESIGN LOAD - HS 20	5
(63)	OPER RATING METHOD - Ld Factor (LFR) tons HS20	1
(64)	OPERATING RATING	42 T
(65)	INV RATING METHOD - Ld Factor (LFR) tons HS20	1
(66)	INVENTORY RATING	25 T
(70)	BRIDGE POSTING - Equal or above legal loads	5
(41)	STRUCT OPEN, POSTED, CLOSED - Open, no restrictions	A

APPRAISAL

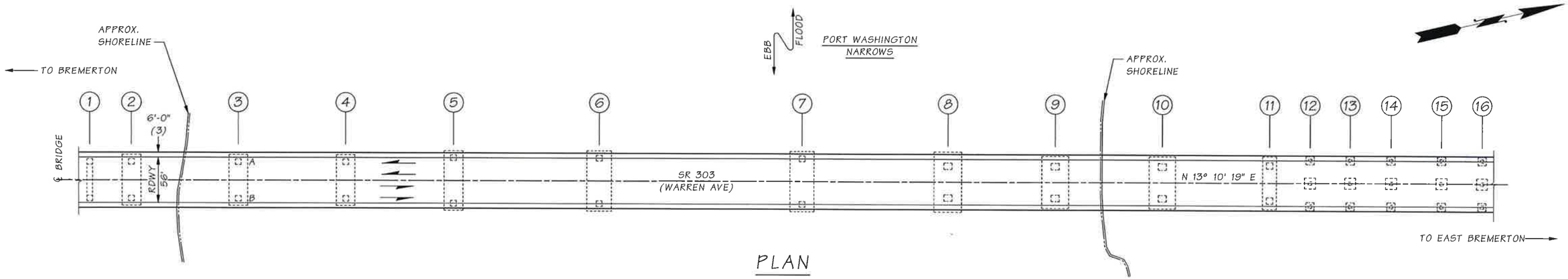
(67)	STRUCTURAL EVALUATION	5
(68)	DECK GEOMETRY	4
(69)	UNDERCLEARANCES, VERTICAL & HORIZONTAL	4
(71)	WATERWAY ADEQUACY	8
(72)	APPROACH ROADWAY ALIGNMENT	8
(36)	TRAFFIC SAFETY FEATURES	1111
(113)	SCOUR CRITICAL BRIDGE	3

PROPOSED IMPROVEMENTS

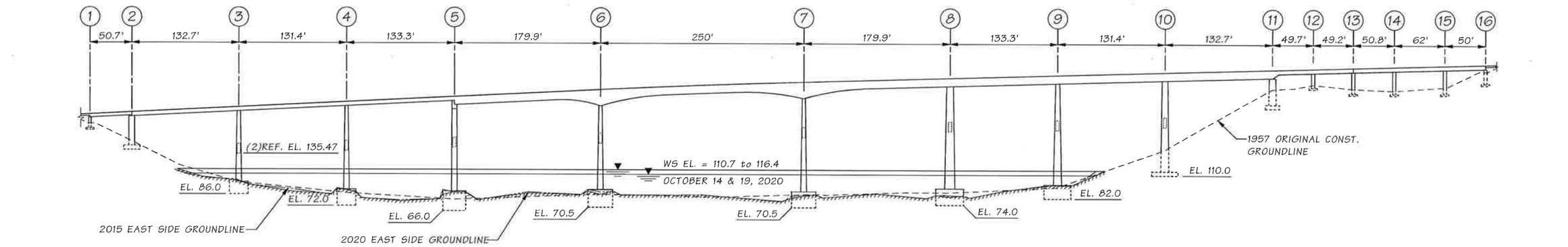
(75)	TYPE OF WORK -	351
(76)	LENGTH OF STRUCTURE IMPROVEMENT	1717 ft
(94)	BRIDGE IMPROVEMENT COST	$19,230,000
(95)	ROADWAY IMPROVEMENT COST	$3,846,000
(96)	TOTAL PROJECT COST	$38,461,000
(97)	YEAR OF IMPROVEMENT COST ESTIMATE	2014
(114)	FUTURE ADT	57895
(115)	YEAR OF FUTURE ADT	2038

INSPECTIONS

(90)	INSPECTION DATE 10/20	(91) FREQUENCY 24 MO	
(92)	CRITICAL FEATURE INSPECTION:		(93) CFI DATE
	(A) FRACTURE CRIT DETAIL - YES -	24 Month	(A) 10/20
	(B) UNDERWATER INSP - YES -	60 Month	(B) 10/20
	(C) OTHER SPECIAL INSP - NO -	Month	(C) __/__



PLAN



ELEVATION

LOOKING WEST

DATUM

CITY OF BREMERTON

LEGEND:

EL. 0.0 ⊕ FIELD MEASURED ELEVATION

NOTES:

1. REFERENCE CONSTRUCTION DRAWINGS: SECONDARY STATE HIGHWAY NO. 21-B; PORT WASHINGTON NARROWS BRIDGE, DATED MAY 17, 1957.
2. REFERENCE ELEVATION: BOTTOM OF PIER 3 STRUT - EL. 135.47; BASED ON CITY OF BREMERTON DATUM. CITY OF BREMERTON DATUM = MLLW + 109.4 FT.
3. WIDTH INCLUDES SIDEWALK AND BARRIER.

Date:	OCTOBER 14, 2020
Scale:	MGDS SCALE 1:750
Drawn By:	DON
Reviewed By:	DRB

WSDOT Dive Team

Washington State Department of Transportation
Bridge and Structures Office

303/12 PORT WASHINGTON CS1840
WSDOT SID #0005565A
UNDERWATER INSPECTION

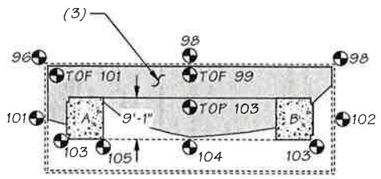
LAYOUT

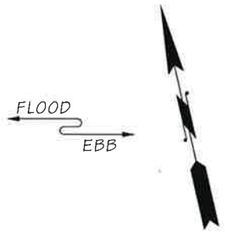
SHEET NO. 1

SHEET 1 OF 5 SHEETS

H:\AAWork\2020 Work Items\303-12 Port Washington Narrows\303-12 Port Washington Narrows 2020 UW.MAN

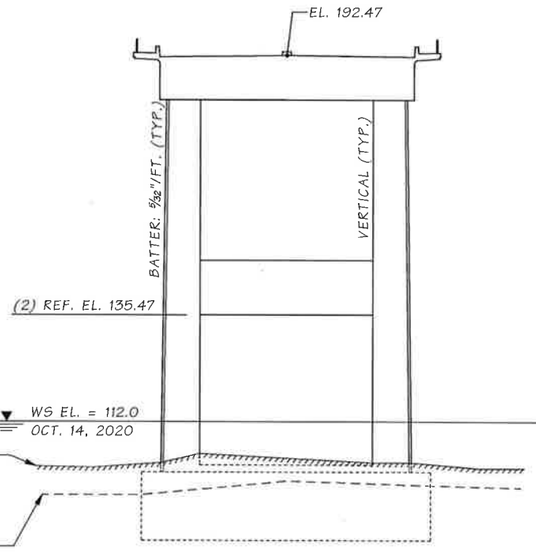
Thu Jan 07 08:31:26 2021





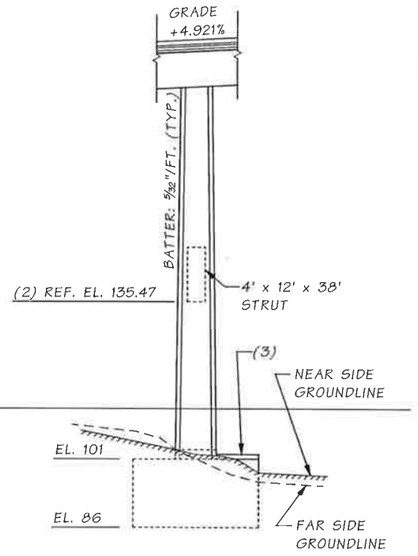
PIER 3 - PLAN

63'-7" x 24'-1" COFFERDAM
62'-6" x 23'-0" FOOTING
38'-0" x 9'-1½" PEDESTAL



PIER 3 - ELEVATION

LOOKING NORTH



PIER 3 - VIEW

LOOKING WEST

LEGEND:

100 FIELD MEASURED ELEVATION

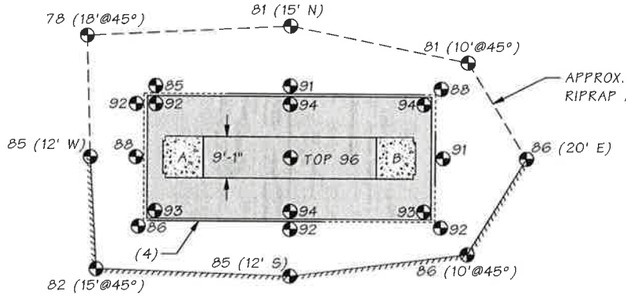
EXPOSED AREA OF FOOTING AND PEDESTAL

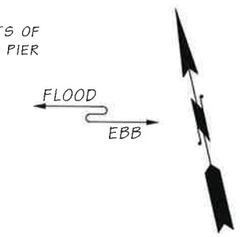
TOP TOP OF PEDESTAL

TOF TOP OF FOOTING

NOTES:

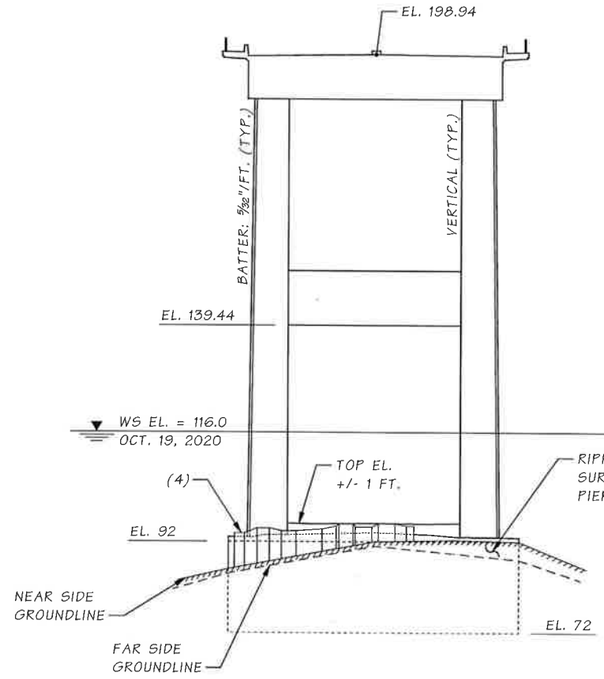
1. REFERENCE CONSTRUCTION DRAWINGS: SECONDARY STATE HIGHWAY NO. 21-B; PORT WASHINGTON NARROWS BRIDGE, DATED MAY 17, 1957.
2. REFERENCE ELEVATION: BOTTOM OF PIER 3 STRUT - EL. 135.47; BASED ON CITY OF BREMERTON DATUM. CITY OF BREMERTON DATUM = MLLW + 109.4 FT.
3. PIER 3 EXPOSED TOP OF FOOTING (TOF) ELEVATION IS 101' (PER PLANS) VARYING ± 1 FT.
4. EXPOSED REMNANT SHEETPILE COFFERDAM 1 FT. TO 3 FT. ABOVE TOF.





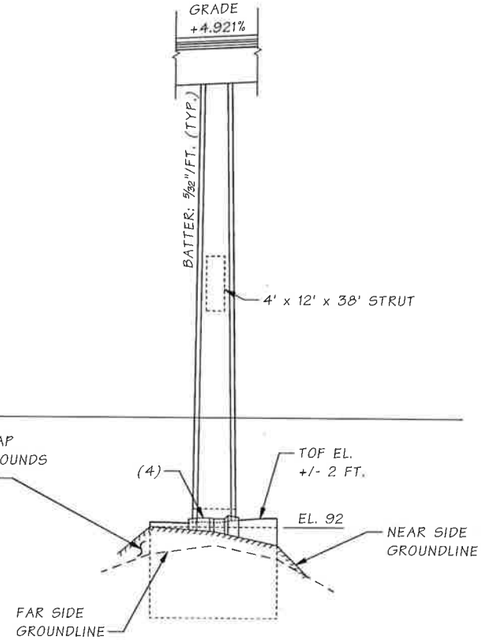
PIER 4 - PLAN

64'-1" x 28'-1" COFFERDAM
62'-6" x 27'-0" FOOTING
38'-0" x 9'-1½" PEDESTAL



PIER 4 - ELEVATION

LOOKING NORTH



PIER 4 - VIEW

LOOKING WEST

Date:	OCTOBER 14, 2020
Scale:	MGDS SCALE 1:200
Drawn By:	DON
Reviewed By:	DRB

WSDOT Dive Team

Washington State Department of Transportation
Bridge and Structures Office

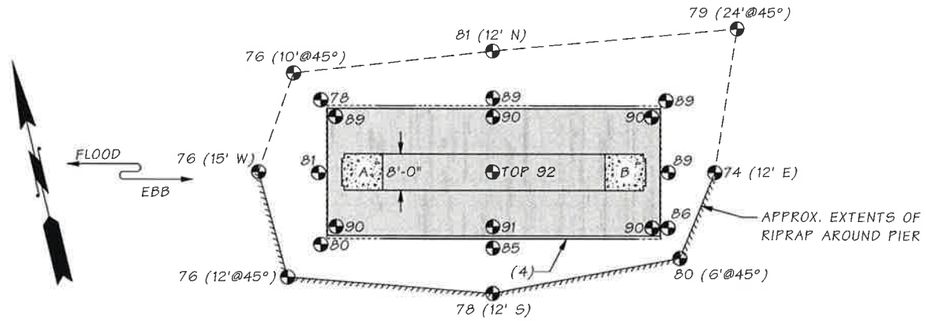
303/12 PORT WASHINGTON CS1840
WSDOT SID #0005565A
UNDERWATER INSPECTION

PIER 3 AND PIER 4

SHEET NO. 2
SHEET 2 OF 5 SHEETS

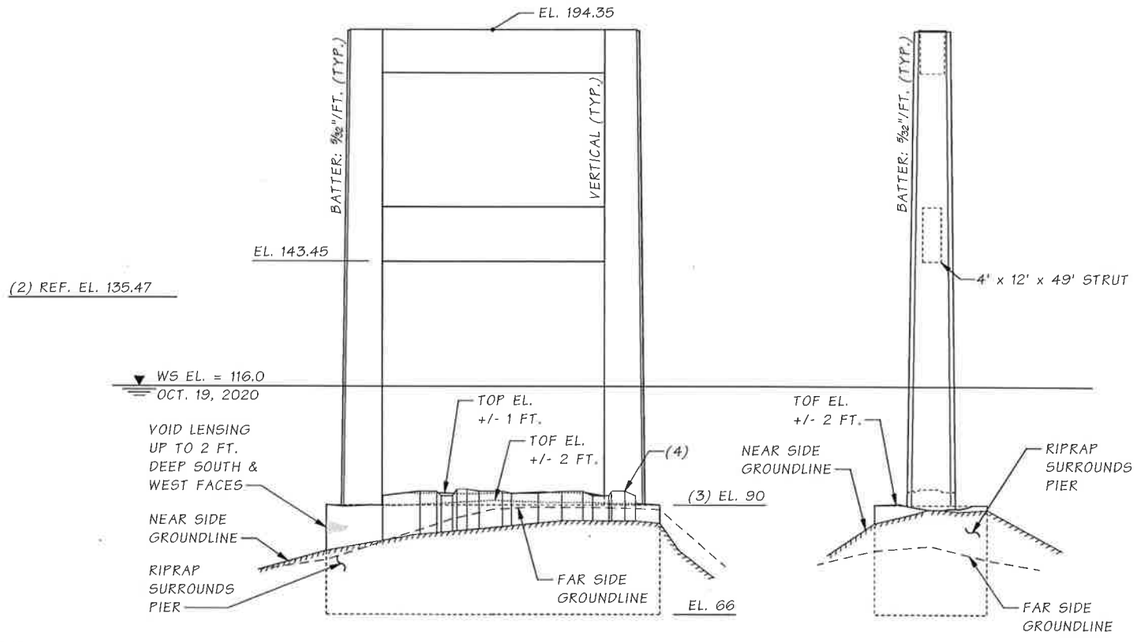
H:\AAWork\2020 Work Items\303-12 Port Washington Narrows\303-12 Port Washington Narrows 2020 UW.MAN

Thu Jan 07 08:30:55 2021



PIER 5 - PLAN

73'-3" x 29'-3" COFFERDAM
73'-0" x 28'-0" FOOTING
49'-0" x 8'-0" PEDESTAL



PIER 5 - ELEVATION

LOOKING NORTH

PIER 5 - VIEW

LOOKING WEST

LEGEND:

100⊕ FIELD MEASURED ELEVATION

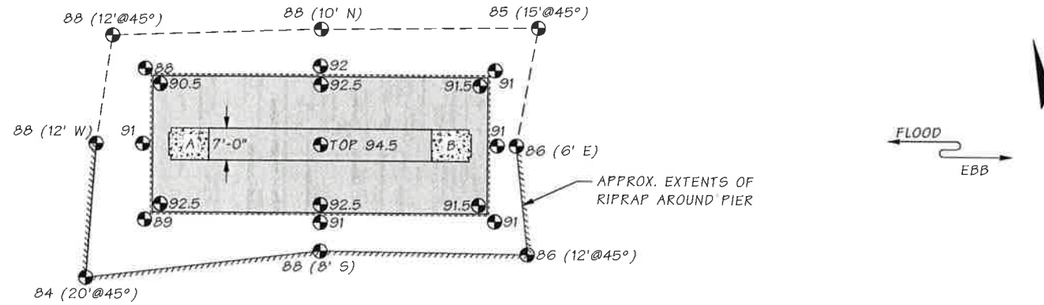
EXPOSED AREA OF FOOTING AND PEDESTAL

TOP TOP OF PEDESTAL

TOF TOP OF FOOTING

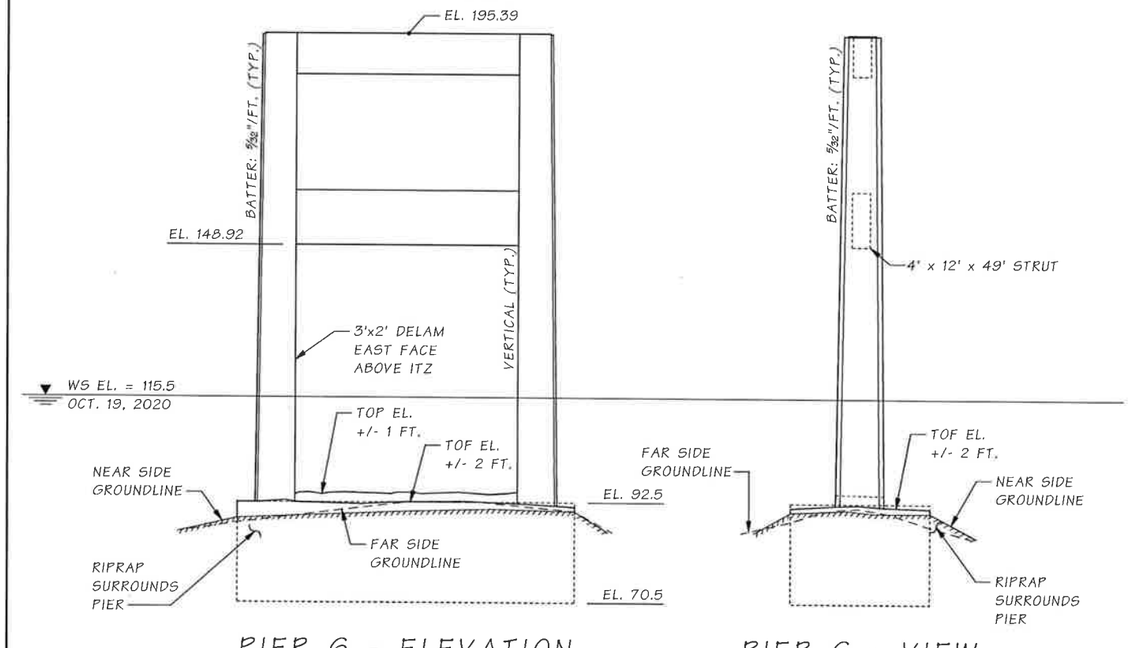
NOTES:

1. REFERENCE CONSTRUCTION DRAWINGS: SECONDARY STATE HIGHWAY NO. 21-B; PORT WASHINGTON NARROWS BRIDGE, DATED MAY 17, 1957.
2. REFERENCE ELEVATION: BOTTOM OF PIER 3 STRUT - EL. 135.47; BASED ON CITY OF BREMERTON DATUM. CITY OF BREMERTON DATUM = MLLW + 109.4 FT.
3. PIERS HAVE HEAVY MARINE GROWTH. TOP OF FOOTING (TOF) ELEVATIONS VARY ±2 FT.
4. EXPOSED REMNANT SHEETPILE COFFERDAM 1 FT. TO 3 FT. ABOVE TOF.



PIER 6 - PLAN

74'-7½" x 30'-8¼" COFFERDAM
74'-0" x 30'-0" FOOTING
49'-0" x 7'-0" PEDESTAL



PIER 6 - ELEVATION

LOOKING NORTH

PIER 6 - VIEW

LOOKING WEST

Date:	OCTOBER 14, 2020
Scale:	MGDS SCALE 1:200
Drawn By:	DON
Reviewed By:	DRB

WSDOT Dive Team

Washington State Department of Transportation
Bridge and Structures Office

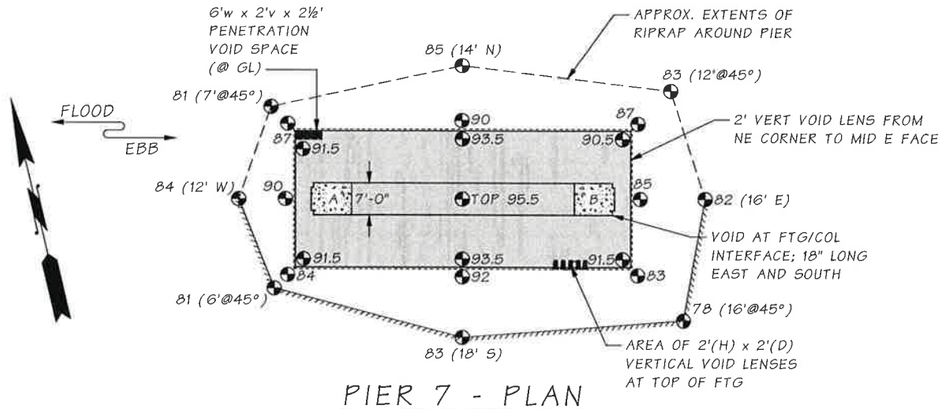
303/12 PORT WASHINGTON CS1840
WSDOT SID #0005565A
UNDERWATER INSPECTION

PIER 5 AND PIER 6

SHEET NO. 3
SHEET 3 OF 5 SHEETS

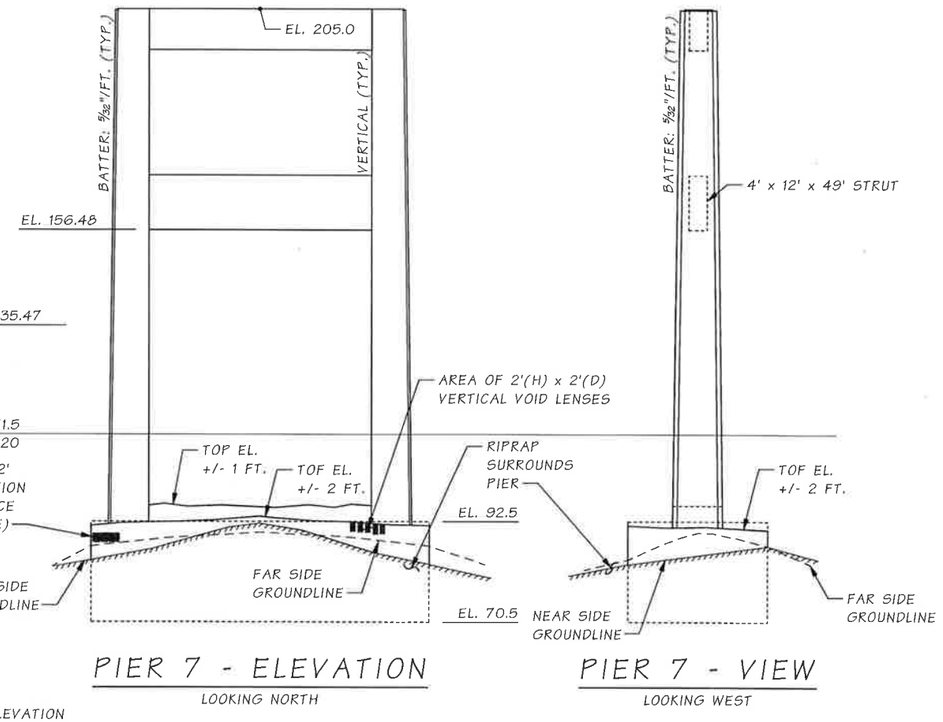
H:\A Work\2020 Work Items\303-12 Port Washington Narrows\303-12 Port Washington Narrows 2020 UW.MAN

Thu Jan 07 08:29:09 2021



PIER 7 - PLAN

74'-7½" x 30'-9" COFFERDAM
74'-0" x 30'-0" FOOTING
49'-0" x 7'-0" PEDESTAL

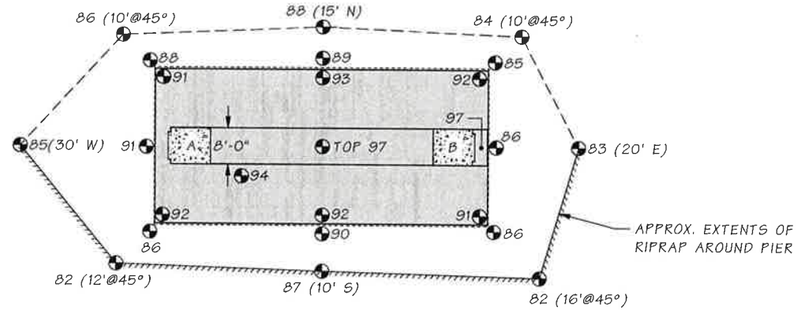


PIER 7 - ELEVATION

LOOKING NORTH

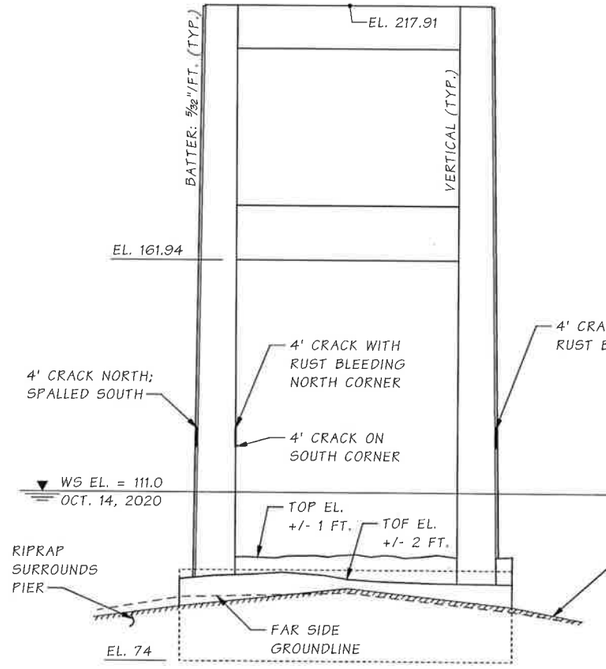
PIER 7 - VIEW

LOOKING WEST



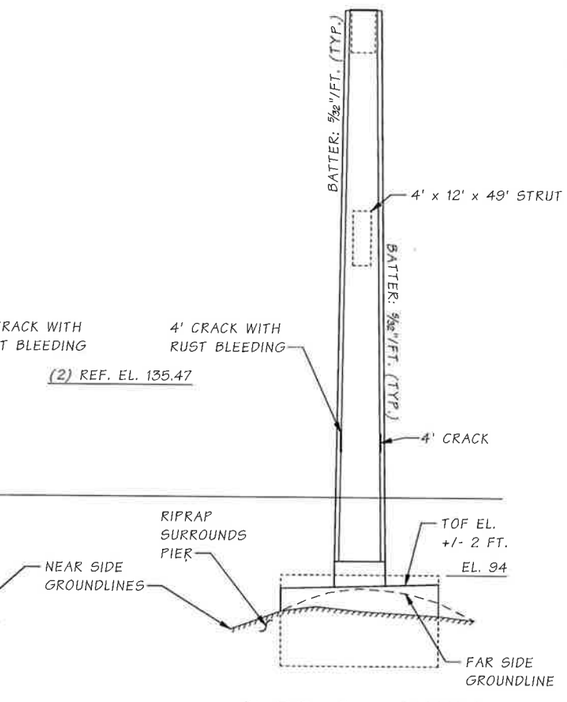
PIER 8 - PLAN

73'-3" x 34'-9" COFFERDAM
73'-0" x 34'-0" FOOTING
49'-0" x 8'-0" PEDESTAL



PIER 8 - ELEVATION

LOOKING NORTH



PIER 8 - VIEW

LOOKING WEST

LEGEND:

100 FIELD MEASURED ELEVATION

EXPOSED AREA OF FOOTING AND PEDESTAL

TOP TOP OF PEDESTAL

TOF TOP OF FOOTING

NOTES:

1. REFERENCE CONSTRUCTION DRAWINGS: SECONDARY STATE HIGHWAY NO. 21-B; PORT WASHINGTON NARROWS BRIDGE, DATED MAY 17, 1957.
2. REFERENCE ELEVATION: BOTTOM OF PIER 3 STRUT - EL. 135.47; BASED ON CITY OF BREMERTON DATUM. CITY OF BREMERTON DATUM = MLLW + 109.4 FT.
3. PIERS HAVE HEAVY MARINE GROWTH UP TO 1 FT. THICKNESS.

Date:	OCTOBER 14, 2020
Scale:	MGDS SCALE 1:200
Drawn By:	DON
Reviewed By:	DRB

WSDOT Dive Team

Washington State Department of Transportation
Bridge and Structures Office

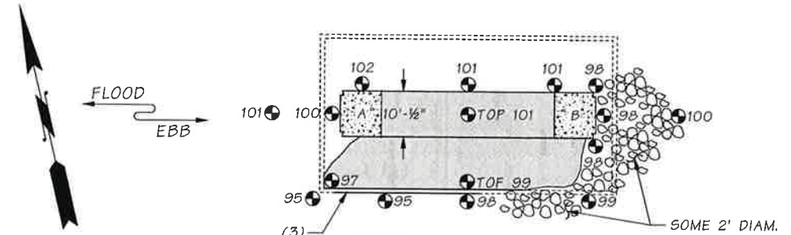
303/12 PORT WASHINGTON CS1840
WSDOT SID #0005565A
UNDERWATER INSPECTION

PIER 7 AND PIER 8

SHEET NO. 4
SHEET 4 OF 5 SHEETS

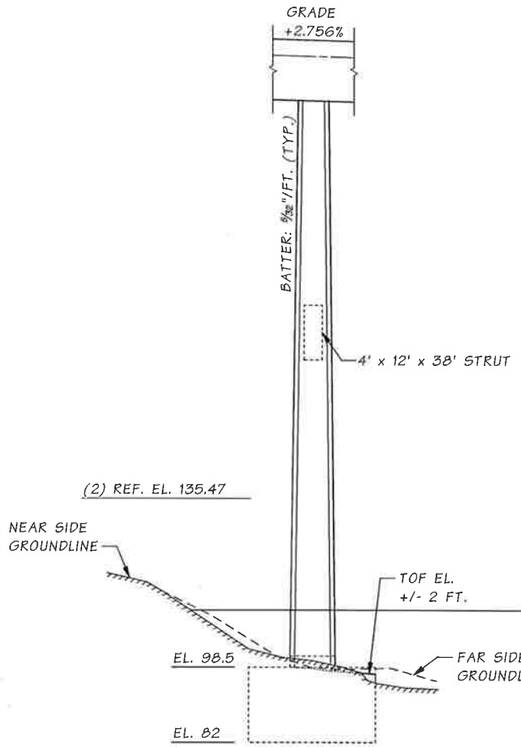
H:\AAWork\2020 Work Items\303-12 Port Washington Narrows\303-12 Port Washington Narrows 2020 UW.MAN

Thu Jan 07 08:28:30 2021



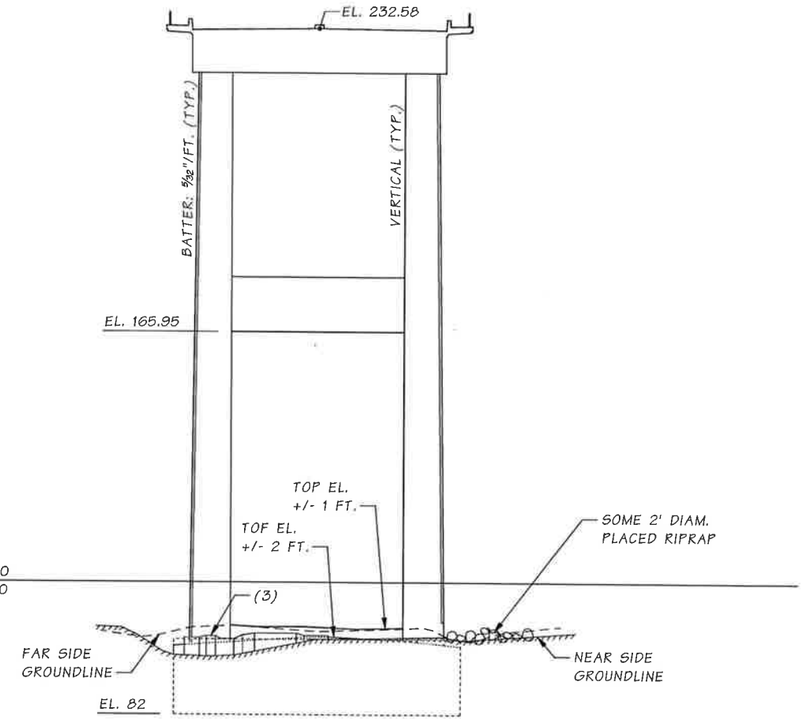
PIER 9 - PLAN

65'-5" x 34'-9" COFFERDAM
63'-6" x 33'-0" FOOTING
38'-0" x 10'-½" PEDESTAL



PIER 9 - VIEW

LOOKING EAST



PIER 9 - ELEVATION

LOOKING NORTH

LEGEND:

100 ⊕ FIELD MEASURED ELEVATION

▱ EXPOSED AREA OF FOOTING AND PEDESTAL

TOP TOP OF PEDESTAL

TOF TOP OF FOOTING

NOTES:

1. REFERENCE CONSTRUCTION DRAWINGS: SECONDARY STATE HIGHWAY NO. 21-B; PORT WASHINGTON NARROWS BRIDGE, DATED MAY 17, 1957.
2. REFERENCE ELEVATION: BOTTOM OF PIER 3 STRUT - EL. 135.47; BASED ON CITY OF BREMERTON DATUM. CITY OF BREMERTON DATUM = MLLW + 109.4 FT.
3. EXPOSED REMNANT SHEETPILE COFFERDAM UPTO 1 FT. ABOVE TOF.

Date:	OCTOBER 14, 2020
Scale:	MGDS SCALE 1:200
Drawn By:	DON
Reviewed By:	DRB

WSDOT Dive Team

Washington State Department of Transportation
Bridge and Structures Office

303/12 PORT WASHINGTON CS1840
WSDOT SID #0005565A
UNDERWATER INSPECTION

PIER 9

SHEET NO. 5
SHEET 5 OF 5 SHEETS

H:\AAWork\2020 Work items\303-12 Port Washington Narrows\303-12 Port Washington Narrows 2020 UW.MAN
Thu Jan 07 08:27:36 2021